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ABSTRACT

While there was no question that part-time instructors provided a quality of instruction equal to that of full-time faculty at Saddleback College (California), there were differences in the functions performed by these two faculty groups due to limited institutional involvement supported by the terms of employment for part-time instructors. A study was conducted to compare the student preference level for full-time instructors with that for part-time instructors. The enrollment distribution of 3,838 students who registered in 43 different courses with comparable class sections taught by either full-time instructors (130 class sections and 46 instructors) or part-time instructors (103 class sections and 57 instructors) was used to calculate a student preference score for the instructor of each class section. Based on study findings, it was concluded that the full-time faculty student preference score was significantly higher than that score for part-time instructors. With 99% certainty, the difference between these scores was found to lie between 9% and 35% of the average course enrollment per section. A series of recommendations were developed to improve student relations with and perceptions of part-time faculty. A three-page bibliography concludes the document. (EJV)

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DETERMINATION OF THE EFFECT OF AN INSTRUCTOR'S EMPLOYMENT STATUS (FULL-TIME OR PART-TIME) ON THE DECISION OF STUDENTS TO ENROLL

by

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A Practicum presented to Nova University in partial fulfillment of the requirements for the degree of Doctor of Education

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ABSTRACT

Saddleback College relied heavily on the use of part-time faculty to present the academic program to students. While there was no question that part-time instructors provided a quality of classroom instruction equal to that of full-time faculty, there were differences in the functions performed by these two faculty groups due to the limited institutional involvement supported by the terms of employment for part-time instructors. Some of these differences were observable by students. It was felt that if these differences were sufficient to allow development of a student preference for full-time instructors, the success of several instructional innovations that heavily involved the use of part-time instructors was possibly threatened.

The purpose of this study was to compare the student preference level for full-time instructors with the student preference level for part-time instructors.

The study followed a quasi-experimental design. The enrollment distribution of 3838 students who registered in 43 different courses with comparable class sections taught by either full-time instructors (130 class sections, 46 instructors) or part-time instructors (103 class sections, 57 instructors) was used to calculate a student preference score for the instructor of each class section. The student preference score for the instructor of a course section was defined to be the percent deviation of the class section enrollment from the average enrollment per section for comparable sections of the course.

The null hypothesis for this study was that the mean student preference score for part-time instructors was equal to the mean student preference score for full-time instructors. This hypothesis was tested using a two-tailed z-test at a 0.01 level of significance. It was found that the mean student preference score for full-time instructors exceeded the score for part-time instructors and the difference produced a calculated z-score of 4.23. The null hypothesis was rejected.

It was concluded that the full-time faculty student preference score was significantly higher than that score for part-time instructors. With 99 percent certainty, the difference between these scores was found to lie between 9 percent and 35 percent of the average course enrollment per section.

It was recommended that part-time instructors who wished to hold office hours be matched with full-time faculty members willing to share their office space. It was recommended that students of part-time instructors be given access to "drop-in" faculty tutoring. It was also recommended that a part-time faculty committee be formed to act as a voice for part-time instructors. It was felt that these actions would decrease student awareness of the differences between the two faculty groups and, thus, contribute to a dissolution of the student preference for full-time faculty.

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Chapter 1

INTRODUCTION

Nature of the Problem

Saddleback College relied heavily on the use of part-time, temporary faculty to present the educational program to students. Over 71 percent of the 714 faculty members of the College were employed on a part-time basis (Hodge, 1986a:30). Students often became aware of the employment status of their instructors because of the existence of differences in the terms of employment between full-time and part-time faculty. Because they constituted such a large part of the teaching staff of the College, part-time instructors were often called upon to present variations of the the standard educational program and innovative instructional efforts to the students. Midsemester courses, midafternoon classes, pre-algebra developmental mathematics classes, evening and Saturday classes were usually staffed by part-time faculty. Often such schedule or program variations were instituted to accomodate otherwise unsatisfied student demand for services. Examples were easily found. With classroom space saturated throughout the morning and early afternoon hours, it was a natural development for the Office of Instruction to request that the schedule for some course sections be moved into the midafternoon. These class times were less popular with full-time instructors as well as students; consequently, part-time faculty were called upon to teach these class sections. When the entire full-time mathematics faculty became committed to many other urgent activities,

all sections of the prealgebra developmental mathematics course were assigned to part-time instructors. To meet the anticipated student demand for this course, three of these part-time instructors agreed to offer their class sections in a large lecture format. No other mathematics courses were offered in such a format.

Often these variations and innovations served as much to benefit the College as the students. Successful midafternoon courses were thought to not only attract students who could not find a seat in a class at an earlier time of the day, but also students with less traditional personal schedules who could only attend class at that time. Consequently, some totally new students were added to the College attendance figures and corresponding additional State funds were brought to the College. While large lecture classes provided additional seats for students seeking enrollment in the course, the College only paid the instructor at a higher than normal rate if sufficient additional students actually enrolled.

Often, also, these variations and innovations came at a price to many students. There was generally no a great deal of interest in midafternoon classes (Sworder, 1986a:36) and mathematics students were often not eager to enroll with one hundred other students in an arithmetic class. Because of these potentially negative aspects, program variations and innovations were usually accompanied by a marketing effort to promote student interest. Little thought was given to the effect of the instructor's employment status in this effort to draw students into nontraditional channels. No information existed that indicated registering students were indifferent to the employment status of the

assigned instructors. However, without such indifference, many program variations expected to draw only a minimal class size were perhaps doomed to failure before class registration even began.

Purpose of the Study

The purpose of this study was to compare the preference level of a group of full-time instructors with the preference level of a comparable group of part-time instructors as held by continuing Saddleback College students at the time of course registration. The independent variable of this study was the instructor employment status: full-time or part-time. The dependent variable was the preference level for the instructor. This variable was a function of continuing student enrollment at the end of the priority registration period for such students.

Research Hypothesis

The research hypothesis for this study was that continuing students were indifferent to the employment status of their instructors at the time of course registration.

Method of Study

This study was based on a quasi-experimental research design. Using the existent Schedule of Classes (Saddleback College, 1986a and 1986b) a set of courses was identified in which students had a choice between class sections taught by either full-time instructors or part-time instructors during comparable time periods of the instructional day. Based on the enrollment distribution of continuing students, a numerical

value for student preference was calculated and assigned to each instructor of a class section. A comparison was made between the mean student preference value assigned to full-time faculty and the mean student preference value assigned to part-time faculty. The difference between these means was investigated using the z-test statistic and the procedure for testing the significance of the difference between two means when the samples were large (Hays, 1981:283).

Chapter 2

BACKGROUND AND SIGNIFICANCE

Background and Literature Review

Development and Use of the Part-Time Faculty

Part-time instructors have always constituted a significant portion of the community college faculty (Cohen and Brawer, 1982:69). In 1953, 48 percent of the 23,762 instructors employed by community colleges nationally served in a part-time capacity. This portion declined steadily until it reached a minimum value of 34 percent in 1968 when 97,443 community college instructors were employed nationally (Cohen and Brawer, 1982:71). Part-time instructors were originally used as a supplement to the small full-time faculties. They were typically community experts who provided specialization, enhancement, and flexibility to the educational program (Kekke, 1983:1). During the 1970's college administrators began to hire part-time instructors in order to slow the rapidly accelerating costs of instruction, because their courses often cost as little as one-third those offered by full-time faculty (Cohen and Brawer, 1982:137). The fastest growing segment of this new wave of part-time faculty was those interested in full-time assignments. Rather than specialists, these instructors taught core courses in the educational programs of the colleges (Kekke, 1983:1). By 1980, 56 percent of the 238,841 community college instructors employed nationally held part-time assignments (Cohen and Brawer, 1982:71).

In a 1975 survey of the California community colleges, it was found that 58 percent of the state-wide faculty was part-time. Although 62 percent of the community college instruction (in terms of full-time equivalents) in the State was handled by full-time faculty, a significant portion of this was done on an overload basis. Fifty-three percent of the full-time community college faculty taught also in part-time positions on an extra compensation basis (Sewell, Brydon, and Plosser, 1976:17). By 1983, more than 60 percent of all California community college instructors worked on a part-time basis (Rubiales, 1986:7). In an effort to guard against possible excessive use of part-time instructors, legislation was enacted in California that prohibited districts from employing part-time instructors in greater numbers (as measured by weekly faculty contact hours) than the average used over the three year period 1980-1981 through 1982-1983 (Commission, 1986:15). Clemens (1986:1) found that the proportion of part-time instructors in California community colleges was over 60 percent in 1985. He estimated that one-third to one-half of actual instruction (in terms of full-time equivalents) was handled by part-time faculty.

Comparison of Full-Time Faculty and Part-Time Faculty

The rapid transformation in the community college faculty during the 1970's stimulated much debate on whether hiring part-time instructors instead of full-time instructors contributed to or detracted from the educational quality of a college (Friedlander, 1979:65). Fully mindful of the budget advantages part-time faculty presented to the college, deans and presidents questioned the competence of part-time faculty to personify the college to students and sought faculty evaluation

procedures that would insure parity between the full-time and part-time instructors (Behrendt and Parsons, 1983:34). These instructional quality concerns spawned several investigations that compared part-time community college teachers with full-time teachers at the community college level.

Friedlander (1980) compared part-time and full-time instructors in several areas thought to affect their quality of instruction. He used research reports available through the Educational Resources Information Center (ERIC) and found it likely that part-time instructors adversely affected the quality of instruction provided by a college. The items Friedlander compared included: teaching experience, continuity of employment, degree attainment, selection of course materials, reading requirements for students, use of instructional media, use of out-of-class activities, use of instructional support services, grading practices, availability to students, and involvement in professional activities. This study was much criticized because of its emphasis on "inputs" as criteria rather than results achieved from the instructional experience (Grappa, 1984:83). Several investigations were initiated in this alternative vein.

Cruise, Furst, and Klimes (1980) compared the classroom teaching effectiveness of full-time and part-time faculty at a midwestern community college. The comparison was based on three separate evaluation instruments: students evaluation of teachers, teacher self-evaluation, and administrator evaluation of teachers. They concluded that no statistically significant differences on the evaluations taken as a whole existed between the two faculty groups (Cruise, Furst, and Klimes, 1980:55).

Behrendt and Parsons (1983) compared full-time and part-time instructors at Hagerstown Junior College (MD) using data that dealt directly with classroom instruction obtained from the results of individual faculty evaluations. Thirteen of the student evaluation questionnaire items concerned classroom practices. The remaining two items dealt with academic program advisement. The supervisor evaluation was completed on the basis of a classroom visitation and contained eleven items that focused on classroom practices. When evaluation results for the group of part-time instructors were compared with those results for the group of full-time instructors, no significant differences emerged between the two groups (Behrendt and Parsons, 1983:39).

Turgeon (1983) developed a comparative profile of full-time and part-time faculty at Corning Community College (PA). The study focused on questionnaire response data and student evaluations. Based on the results of the student evaluations, it was determined that there were no significant differences between the two faculty groups (Turgeon, 1983:28).

Grappa (1984:84) described a study at Elgin Community College (IL) that examined the instructional effectiveness of full-time and part-time faculty. The variables measured were: students ratings of the teacher's effectiveness, class retention rates, and subsequent student achievement in advanced courses. No significant differences were found between full-time and part-time faculty for these three dimensions of instructional effectiveness. It was thus concluded that part-time faculty could be expected to deliver quality instruction.

Grappa (1984:84) concluded, following a literature review, that while information that compared the teaching effectiveness of part-time and full-time faculty in community colleges was minimal and inconclusive, it appeared that part-time faculty by themselves did not detract from the quality of instruction and that they could enrich it greatly.

In view of the conclusions of the studies described above, several authors rose in partial support of Friedlander's (1980) conclusions. Kekke (1983:6) believed that there were negative implications in the heavy reliance on part-time faculty even though the quality of their classroom teaching was not at issue. Rubiales (1986:7) noted that "part-time instructors are not in and of themselves anyless qualified than full-time faculty." He was concerned that excessive use of part-time faculty in program areas often left a handful of full-time instructors with an unachievable goal of providing a "nucleus for continuity and stability" (Rubiales, 1986:7). In California, the Commission for the Review of the Master Plan for Higher Education (1986:14) stated that part-time teachers were generally unavailable to students outside the classroom and did not participate in curriculum development or other activities. The Commission (1986:14) concluded that ". . . they cannot contribute to the collegial nature of the campus administration or to the counseling and other forms of support needed by many students, and their contributions to the quality of instruction is less than it should be."

Total rejection of Friedlander's (1980) conclusions was not without its advocates. Clemens (1986:2) believed that there was no difference between the job performed by a full-time instructor and that

performed by a part-time instructor. "Both do all the things they must to carry out their professional obligation. All other distinctions are artificial or specious" (Clemens, 1986:2).

Comparison of Faculty Groups Through Student Evaluations

Ultimately, any change in the instructional quality of a college will impact those who were instructed, namely the students. This is true whether concern rests with classroom teaching effectiveness or the quality of the educational program as a whole. Student opinion is thus an important resource in any investigation concerned with instructional quality. The comparative studies described in the previous section all relied heavily on the use of student evaluations. The literature concerned with faculty evaluation procedures supported the careful use of evaluations by students (Aubrecht, 1979; Boggs, 1983; Van Allen, 1982; Whitley, 1984). Cashin (1983:57) stated that such evaluations were probably the most widely used source of information for evaluating faculty. Van Allen (1982:43) found that student evaluation of faculty was an objective measure of the quality of instruction offered in the classroom. Smith (1983:12) described an example of a model faculty evaluation framework that gave student ratings twice the weight of either peer committee or department head ratings in the area of teaching effectiveness. In spite of this support in the literature, student evaluation of faculty was not universally accepted in practice. Cashin (1983:57) pointed out that faculties, in general, have expressed a great deal of concern about the use of student ratings. At Saddleback College, student evaluations were contractually prevented from being made part of the faculty evaluation process

(Saddleback College, 1984:24). As a variation on the traditional written student evaluation, Boggs (1983:39) suggested the use of student behavior to assess student opinions.

Students had access to information concerning the differences between full-time and part-time faculty from sources other than activities within the confines of the classroom. Perhaps the most obvious of these differences was the instructor availability to students outside of class. Because a full-time instructor taught more classes than a part-time instructor, had assigned office space and was required to maintain regularly scheduled office hours for students while part-time instructors had neither an office or an office hour requirement; full-time instructors were generally more available to students than part-time instructors. This difference was noted by many authors (Coher and Brawer, 1982:72; Commission, 1986:14; Friedlander, 1980:33; Greenwood, 1980:56; Kekke, 1983:6; Landers, 1979:4; Rubiales, 1986:7). Greenwood (1980:56) believed that even the use of "bull pen" style offices for part-time faculty was inadequate. He stated that this "herd approach" to office allocation was demeaning to the individual and further suggested that the absence of a private office for part-time faculty subliminally informed the students that their teachers had a second rate status in the eyes of the college. He found this issue to be particularly important with the older, nontraditional college students who had come to relate the possession of space with success. "Often unsure of their own fitness for academic pursuit, they are shaken when their fears are compounded by the administration's failure to invest an office in a faculty member" (Greenwood, 1980:56).

Another much discussed difference between the full-time and part-time faculty was the minimal impact of the part-time faculty in the planning and operation of the college (Greenwood, 1980:57; Friedlander, 1980:30; Mc Gaughey, 1985:45; Commission, 1986:14; Kekke, 1983:1). Landers (1979:4) felt that any college that employed large numbers of part-time faculty should make certain that these persons had the potential for being as valuable as a full-time faculty member. Supporting this view, Greenwood (1980:57) suggested the establishment of a committee of part-time faculty that could act in an advisory capacity to the college administration to promote the socialization of the part-time faculty.

Summary of the Literature Review and the Relationship to the Practicum

The literature contained the descriptions of several studies that compared the instructional quality of full-time and part-time community college instructors. Those investigators who focused on variables that were directly observable during classroom instruction found there to be no significant difference between the teaching effectiveness of the two groups of instructors. However, the literature contained many references to the undesirability of the heavy reliance on part-time faculty by a college. Several differences between these two faculty groups were reported and heavy assignment of part-time instructors was felt to negatively affect the instructional quality of the institution as a whole. Overall, the amount of research in this area was considered minimal and inconclusive.

Student evaluation of faculty was found to be a well studied and generally accepted research technique for measuring teaching

effectiveness. This support for the use of student opinion existed for both written student evaluations and direct observation of student behavior, although it was not always accepted at the college level by the faculty.

The literature supported both the research techniques employed in this practicum and the need for research in this area. This practicum employed observable student behavior as the criterion for the determination of a difference of student preference between full-time and part-time faculty. This use of student opinion was not aimed at the area of in class teaching effectiveness, but rather at the more global issue of instructional quality. It was felt that if the differences between the two faculty groups reported by the literature were of significance, student behavior would show a preference for one group over the other.

Justification of the Study from an Institutional Perspective

Saddleback College employed a large contingent of part-time, temporary instructors. Over 71 percent of the 714 faculty members fell into this category. This was about 10 percent greater than the California community college faculty average of above 60 percent part-time instructors. Recent events had drawn the attention of the College community to the distinction between these two faculty groups. The Board of Trustees adopted a five year plan for the increased hiring of full-time faculty, because that group was seriously under represented in relation to the part-time faculty. The limited commitment provided by part-time faculty was cited as the cause of problems with some instructional programs (Hodge, 1986a:51). In October 1986, the Board of

Trustees signed an agreement for modification to the certificated employee contract that granted "senior part-time status" to qualified part-time, temporary faculty (Carroll, 1986:2). Loreen Inman (1986a:2), a part-time instructor at Saddleback College, felt this was a "giant leap forward" in establishing the rights of part-time instructors and in "redressing the inequities with which part-time instructors have struggled for years." A faculty negotiator and full-time instructor stated, in the College newspaper, that "The way part-timers are treated is rotten to the core. If I were a part-timer, I would be very bitter." (Whitcomb, 1986:2).

Another example of the separation between the two faculty groups was apparant in the recent Saddleback College Accreditation Self-Study Survey. A survey questionnaire was given to each full-time instructor and administrator. However, only a handful of part-time instructors were asked to respond. There were 144 responses from the full-time faculty and 21 responses from part-time faculty (Hodge, 1986b:1). In that survey, the full-time faculty neither agreed nor disagreed (that is, there was no collective opinion) with the statement that "Instruction by part-time instructors is essentially equal in quality to that provided by full-time instructors." (Hodge, 1986b:3). Although the College administrators agreed with that statement, they disagreed with the statement that "The faculty is sufficient in number to provide effective instruction and counseling services." (Hodge, 1986b:5). This response suggested that dissatisfaction existed with heavy reliance on part-time instructors by the College. In another accreditation related item, the Student Service Standard Committee specified the need to improve the visibility of its programs with part-time instructors (Hodge, 1986a:76).

It was apparent from these references that issues concerning part-time instructors were among the critical items affecting the College. Further, discussions dealing with many of these issues were published in documents readily available to the College community and particularly the students. Friedlander (1979:66) suggested that an incentive for the use of part-time instructors rather than full-time instructors was the opportunity for the institution to generate a savings in the use of the former group. He reasoned that since institutional funding was based on student attendance, the College received the same money whether students were taught by full-time or part-time faculty. A savings was then generated because part-time faculty were paid less than full-time faculty. This argument rested, however, on the assumption that student enrollment decisions were not affected by the employment status of the individual course instructors. It was possible that the many issues that defined differences between the two faculty groups had lead students to a preference for courses taught by full-time faculty. If such an attitude had developed among students, it was possible that heavy use of part-time faculty caused lower enrollments than would have otherwise been realized. Lower enrollment figures would have translated into less funding for the College. Such a funding loss would have negatively affected the financial health of the College and its ability to deliver necessary educational programs.

Relationship of the Study to the Seminar in Applied Educational Research and Evaluation

This study involved a comparison between two groups of College faculty. The understanding and application of procedures necessary to test statistical hypotheses that compared two groups was a major objective of the Seminar in Applied Educational Research and Evaluation.

Chapter 3

PROCEDURES

Population and Sample

The population involved in this study consisted of the faculty of Saddleback College for the 1986-1987 academic year who taught in subject areas in which both full-time and part-time instructors received class assignments. A sample of these instructors was chosen, based on their class assignments, by referring to the Fall 1986 Schedule of Classes (Saddleback College, 1986a) and the Spring 1987 Schedule of Classes (Saddleback College, 1986b). A set of courses offered on the College campus that had at least one section taught by a full-time instructor and at least one section assigned to a part-time instructor within the day high enrollment period between 7:30 a.m. to 3:00 p.m., Monday through Thursday and 7:30 a.m. to 12:00 noon on Friday was identified. Class sections placed in this set were required to start before 1:30 p.m. and end by 3:00 p.m. Class sections that met only on Fridays were excluded from this set unless all other class sections of that particular course also met on a single day each week. This restriction was included because it was felt that the Friday only class schedule often appealed to a different student market than that attracted to the other schedule days and times included. Another set of courses offered on the College campus that had at least one section taught by a full-time instructor and at least one section assigned to a part-time instructor within the evening high enrollment period between 5:30 p.m.

and 10:00 p.m., Monday through Thursday was also identified. In either set of courses, if only a single class section was taught by a part-time (or full-time) instructor, the number of sections of that course assigned to full-time (or part-time) instructors was not allowed to exceed two. Otherwise, the course was removed from the identified set. This restriction allowed a more balanced arrangement of class section offerings when classified by instructor employment status. It was felt that an important condition for this study was that the registering student always had a choice between at least one class section taught by a full-time instructor and at least one section taught by a part-time faculty. If class sections were closed during registration to additional student enrollment in such a way to cause a violation of this criterion within the sections of an identified course, that course was deleted from the course set upon which this study rested. The quantitative measure of student preference was felt to be very sensitive to the behavior of a single student in very small classes. To improve the comparability of this measure among class sections of various sizes, it was decided to remove courses from the set in which the average enrollment per section was less than six students.

This process selected 23 different day and 20 different evening courses, where otherwise identical courses were considered different if selected from the course offerings of different semesters. The set of day courses involved 175 sections and the sections in the evening course set totalled 58. The union of these two course sets produced a single set with 233 class sections. It was on the class sections in this set that the calculations in this study were based. Full-time instructors

were assigned to 130 of the class sections in this set and part-time instructors taught 103 of the sections.

The number of class sections offered by part-time faculty was relatively balanced with the number of sections offered by full-time faculty over the 43 courses in the set. In 35 of these courses, the number of sections taught by full-time faculty differed from the number assigned to part-time faculty by no more than one section. The difference was three or four sections for 6 courses. The difference was six sections for one course and nine sections for the remaining course in the set.

Student Preference Score

Background and Development

The registration of a student in a particular class section was the culmination of a complicated decision process. Conflicting obligations and desires were resolved by each student individually. Saddleback Community College District research on the flexibility of students in the scheduling process (Sworder, 1986b:26) suggested that students were most concerned about which courses, meeting times and meeting locations (that is, the particular campus or off-campus location) composed their class lists. The data collected for this practicum was carefully restricted to prevent these concerns from interferring with the comparison between the two faculty groups. The meeting times chosen for inclusion in this study were those corresponding to the periods of highest student enrollment and popularity. Of course, not every student prefered the same days or time blocks within this period. Work, child care obligations, class conflicts, or other

activities caused students to individually spread their enrollments over these periods. It was assumed that if nothing else were different about these class sections, student enrollments would have been uniformly divided over the available sections. For example, if 45 students enrolled in 3 similar course sections, each section would have been expected to contain the average number of students per section or 15 students.

Besides meeting times and locations, the Schedule of Classes (Saddleback College, 1986a and 1986b) clearly showed another distinction between class sections. This distinction was the name of the instructor. It was an assumption of this study that similarly scheduled class section enrollments differing from the average value expected were due to student reaction to the identity of the instructor. One possible quantitative measure of this student reaction was the ratio of the difference between the expect and actual enrollments to the expected enrollment. If $\overline{X}$ was used to represent the expected enrollment (that is, the average enrollment per section of a particular course) and X was the actual enrollment, this measure of reaction was expressed algebraically by $(X - \overline{X}) / \overline{X}$.

This measure, however, ignored the implications of a class section drawing sufficient enrollment to saturate its seating capacity and thus require its closing to further student registration. It was assumed that a closed course section would have continued to draw students if left open. The earlier in the registration period considered that the course closed, the greater the additional potential enrollment was assumed to be. To address the situation of a closed class, its actual enrollment was multiplied by a weighting factor. This product

represented the expected class enrollment at the end of the continuing student registration period if the class had continued to draw students at the same rate as prior to its closure. If D was the number of days in the continuing student registration period and the i th class section closed on the D_i th day of this period, the weighting factor, W_i, was defined to be equal to D/D_i. Consequently, if the class was last open on the third day of a six day registration period, the weighting factor was 6/3 = 2. If the class did not close at all, it was last open on the last day, D, of the registration period and the weighting factor was D/D = 1. The weighted enrollment was treated as the actual enrollment for the purposes of this study. Using the previously described measure and this weighting factor, a student preference score for instructors was defined.

Definition

Define the following variables:

N = number of sections of a course. Day and evening courses were treated as separate courses, as were courses offered in different semesters.

E_i = actual enrollment of the ith class section at the end of continuing student registration.

D = number of days of the continuing student registration period.

D_i = the number of the last day of continuing student registration period in which the course was open to students for enrollment.

W_i = enrollment weighting factor of the ith course section.
$= D/D_i$

$\overline{X}$ = average weighted enrollment for a course

$$= \frac{\sum_{i=1}^{N} W_i E_i}{N}$$

With these variables available, the student preference score for the ith course section, SPS_i, was defined to be the percent deviation of the weighted enrollment of the section, W_iE_i, from the course average enrollment per section, $\overline{X}$. Symbolically this was expressed as follows:

$$SPS_i = 100 \frac{W_iE_i - \overline{X}}{\overline{X}} \%$$

Data Collection

Only the behavior of continuing students and certain new students were considered in this study. New students were less likely to be able to identify the full-time instructors. These students registered for classes after the registration for continuing students had been completed and often had to enroll in whatever class section was available. New students, as a group, did not have as free a choice of classes as did the continuing students. For these reasons, new students probably were not able to express a preference for the instructor's employment status and were generally excluded from this study.

Handicapped students, athletic team members and certain other selected students were invited to participate in a priority registration day prior to the beginning of the registration period for continuing students. Some of these students were new to the College. These new students, however, often quickly developed special relationships with student peers and college staff (such as, Special Services advisors, team coaches, and so on). They were able to make class selection decisions using knowledge gained from others who were familiar with the institution. In this respect, they acted somewhat like continuing

students and were included in the student group whose behavior formed the data base for the student preference score calculations.

The data necessary to calculate the student preference scores were the class section enrollments at the end of the continuing student registration period and the date on which each class section closed to further enrollment (if it closed at all during the continuing student registration period). This data was available from the Office of the Dean of Instruction.

Statistical Analysis

Research Hypothesis

The research hypothesis for this study was that continuing students were indifferent to the employment status of their instructors at the time of course registration.

Statistical Hypotheses

Null Hypothesis, H_o: The mean student preference score for part-time instructors, m_p, was equal to the mean student preference score for full-time instructors, m_f.

Alternate Hypothesis, H_1: The mean student preference score for part-time instructors, m_p, was not equal to the mean student preference score for full-time instructors, m_f.

Statistical Test

A two-tailed hypothesis test was completed to determine if the difference between the mean student preference scores for full-time and part-time instructors was significant at the 0.01 level.

The rather conservative α level of 0.01 was chosen because of the potentially political nature of the findings of this study. Rejection of H_o was expected to be interpreted by some as a criticism of the teaching performance of part-time faculty. The potential risks of incorrectly rejecting the null hypothesis warranted the high degree of certainty suggested by a 0.01 significance level. Although this choice increased the likelihood of accepting H_o when it was false, little concern existed for this type of error.

Because both instructor sample sizes exceeded 100, a large-sample significance test for the difference between means was performed (Hays, 1981:283). It was assumed that the distribution of student preference scores was unimodal and symmetric about the mean for the population of instructors previously described. These conditions together with the fact that both full-time and part-time faculty sample sizes exceeded 100 suggested the use of a large-sample significance test for the difference between means using the z-test statistic (Hays, 1981:276,283). The z-score was calculated using

$$z = \frac{X_f - X_p}{\sqrt{\frac{s_f^2}{n_f} + \frac{s_p^2}{n_p}}}$$

where n_f was the number of sections taught by full-time instructors

n_p was the number of sections taught by part-time instructors

X_f was the sample mean student preference score for full-time instructors

X_p was the sample mean student preference score for part-time instructors

s_f was the sample standard deviation of student preference scores for full-time instructors

s_p was the sample standard deviation of student preference scores for part-time instructors

The critical z scores for a two-tailed test with $\alpha = 0.01$ were ± 2.581 (Hays, 1981:646). A calculated z score exceeding +2.581 or less than -2.581 would have triggered rejection of the null hyponthesis.

Assumptions of the Study

1. It was assumed that the identity of the instructor was responsible for enrollment deviations from the mean not due to chance for similarly scheduled class sections of the same course.
2. It was assumed that the distribution of student preference scores over the population for this study was unimodal and symmetric about its mean. Consequently, the Central Limit Theorem supported the z-test for large sample applications.
3. It was assumed that neither full-time nor part-time faculty altered their professional behavior when assigned to sections of courses that also had sections taught by members of the other group. Consequently, it was assumed that individual instructors engaged in no unusual marketing activities in order to draw students to their class sections.
4. It was assumed that students enrolled in accordance with their true preferences.

Limitations of the Study

1. The results of this study were limited to Saddleback College instructors assigned to courses that had multiple sections,

some of which were assigned to part-time instructors while others were taught by full-time instructors.

2. The study was limited to faculty assigned to classes during the 1986-1987 academic year.

Definition of Terms

1. Part-Time Instructor: Any faculty appointment that encompassed less than a normal range of assigned duties and in which the terms of employment recognized the fractional involvement of the faculty member (Mc Gaughey, 1985:37).
2. Full-Time Instructor: Any faculty appointment that encompassed a normal range of assigned duties and whose terms of employment implied a full involvement of the faculty member in the educational program of the College.
3. Continuing Student: A student who had registered for classes at Saddleback College during the immediately preceding semester.
4. Open Class: A class for which students could register.
5. Closed Class: A class for which no additional students could register.
6. Student Preference Score: An expression that described the deviation of a class section enrollment from the mean enrollment per section as a percent of this mean.

Differences Between the Final Practicum Report and the Proposal

A few changes from the practicum proposal were included in the final practicum report. Criteria for selecting the courses used for the instructor comparisons were made slightly more rigorous to insure

meaningful comparisons. The level of significance was changed to reflect the sensitive nature of this topic. The 1987 spring semester was included in the study to allow an increase in the sample size. The hypothesis test was changed to a z-test, because it was deemed more appropriate for the large-sample comparisons sought. The weighting factor that accounted for closed sections was applied to the raw class section enrollments. These weighted enrollment values were then used to calculate the average class section enrollment. This was done to preserve the symmetric nature of the student preference score distribution. It was felt that the originally proposed weighting procedure elongated the tail of the distribution on the side greater than the mean and thus threatened the symmetric feature. The student preference score was further modified to include a factor of 100 in order to allow its interpretation as a percent deviation from the mean. It was hoped that this percent form would allow an understanding of the measure by a greater number of readers.

Chapter 4

RESULTS

Analysis of the Data

A two-tailed large-sample significance test for the difference between means was performed at the 0.01 level of significance using the z-test statistic.

Full-Time Instructor Sample Data

The number of class sections taught by full-time instructors, n_f, was 130.

The sample mean of the student preference scores for full-time instructors, X_f, was 11.27%.

The sample standard deviation of student preference scores for full-time instructors, s_f, was 41.55%.

Part-Time Instructor Sample Data

The number of class sections taught by part-time instructors, n_p, was 103.

The sample mean of the student preference scores for part-time instructors, X_p, was -10.89%.

The sample standard deviation of student preference scores for part-time instructors, s_p, was 38.13%.

Calculation of the z Score

$$z^* = \frac{X_f - X_p}{\sqrt{\frac{s_f^2}{n_f} + \frac{s_p^2}{n_p}}} = \frac{11.27 - (-10.89)}{\sqrt{\frac{(41.55)^2}{130} + \frac{(38.13)^2}{103}}} = \frac{22.16}{\sqrt{13.28 + 14.12}}$$

$$= \frac{22.16}{\sqrt{27.40}} = \frac{22.16}{5.23} = 4.23$$

Hypothesis

The population mean student preference score for full-time instructors was denoted m_f. The population mean student preference score for part-time instructors was denoted m_p. The statistical hypotheses and significance level were:

H_o: $m_f = m_p$

H_1: $m_f \neq m_p$

$\alpha = 0.01$

Finding

The critical values of the z-test statistic for a two-tailed test with a level of significance of 0.01 were found to be ± 2.58 (Hays, 1981:646). Because the calculated value of the z score, z*, was 4.23 and exceeded the positive critical z score of +2.58; the null hypothesis, H_o, was rejected.

Chapter 5

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Discussion

A conservative value of the level of significance was chosen so that the chances of rejecting the null hypothesis when it was true occurred, on the average, only once out of every one hundred such hypothesis tests. The calculated z score was larger than the critical z score by over 1.5 standard deviations. Consequently, it was reasonable to both reject the null hypothesis, H_o, and accept the alternate hypothesis, H_1. It was thus concluded from the findings of this study that there was a significant difference between the mean student preference score for full-time instructors and the mean student preference score for part-time instructors.

Using the numerical values presented in Chapter 4, a 99 percent confidence interval was calculated for this difference using the formula (Hays, 1981:284):

$$\left|\begin{array}{l}\text{Difference of}\\ \text{Population}\\ \text{Means}\end{array} - \begin{array}{l}\text{Difference of}\\ \text{Sample Means}\end{array}\right| \leq 2.58 \left[\begin{array}{l}\text{Standard Deviation of}\\ \text{the difference of}\\ \text{Student Preference}\\ \text{Scores}\end{array}\right]$$

The resulting confidence interval was:

$$22.16 - (2.58)(5.23) \leq m_f - m_p \leq 22.16 + (2.58)(5.23)$$

$$8.67\% \leq m_f - m_p \leq 35.65\%$$

Consequently, it can be stated with 99 percent certainty that the

student preference score for full-time instructors exceeded the student preference score for part-time instructors by a value somewhere between 9% and 35%. Since the student preference score was defined to correspond directly to the percent difference of the class enrollment from the average course enrollment per section; it was concluded, with 99 percent certainty, that the average enrollment in class sections taught by full-time instructors exceeded the average enrollment in competing class sections taught by part-time instructors by a value between 9 percent and 35 percent of the average enrollment per section.

Implications

Although the observed student preference for full-time instructors could impact State funding to the College, it would do so only if a student chose to take no units at all in place of a course for which interest was lost because of the limited instructor alternatives. More likely, this demonstrated student preference has a negative impact on the effort to balance enrollment between course sections. It may also make alternate course sections scheduled at less popular times even less desirable if assigned to a part-time instructor. Since these class sections typically have lower enrollments than those offered during the popular morning and evening times, a few students often determine whether a class will meet the minimum class size requirement. If such classes are canceled, demand is often increased for classes in the already saturated prime times or students are lost to the College all together. Cohen and Atherton (1981:66) described the successful implimentation of an afternoon curriculum at San Diego Mesa College (CA). First priority for teaching in the program

was given to full-time instructors with known student drawing power. These instructors were given the opportunity to teach the classes on an overload basis. This arrangement was potentially attractive to them, because the program allowed the convenience of overload assignments on campus during the day. It is doubtful that Saddleback College full-time faculty would be similarly attracted to the offer of afternoon overload classes, because they generally have the ability to teach overload classes at any time during the day or evening they wish.

It is possible that, for a College with a 71 percent part-time faculty ratio, a significantly higher student preference for full-time faculty could lead to a decline in the reputation of the College among potential new students. The continuing students have the ability, if desired, to identify full-time faculty and are given a better chance of enrolling in their preferred class sections, because they receive earlier registration appointments than new and returning students. If it is perceived that new students are often forced to accept less desirable course sections, the interest in attending Saddleback College by new students could be decreased. If this situation developed, the funding base of the College (that is, student attendance) would be decreased and thus the ability of the College to deliver necessary programs and services negatively impacted.

Recommendations

Nothing in this study should be construed to imply that a difference in the quality of classroom instruction provided by part-time instructors existed from that provided by the full-time faculty. The literature review reported several research studies that found no

significant differences between these two groups in this area. The source of the student preference for full-time faculty found in this study must, therefore, lie in those differences between the two faculty groups that exist external to the classroom setting and are observable by students. Several such potential differences were described in the literature review.

The most obvious of these differences was the lack of office space for most part-time faculty. A few "bull pen" style office spaces have been made available to the part-time faculty in some divisions, but Greenwood (1980:56) was very critical of office space assigned in this manner. As an alternative procedure, it is recommended that part-time instructors who would like to hold office hours for their students on an uncompensated basis be matched with full-time instructors willing to share their office space. In this way, a part-time instructor would have unquestioned access to a private office during a time when the resident full-time instructor was in class, off campus, or otherwise engaged elsewhere.

Because students of part-time instructors are often left with no faculty member to whom they can turn for tutoring or counseling, it is further recommended that "drop in" tutoring by faculty members be instituted in those disciplines in which part-time faculty teach . The schedule for such tutoring could vary from as little as one hour per week to whatever seemed of value to the students. The faculty tutors could be either full-time or part-time instructors. They would be compensated at an appropriate rate and in a manner totally independent of their teaching loads. These recommendations, if adopted, would

significantly decrease the differences in accessibility to the faculty between students of full-time instructors and students of part-time instructors.

Observable by students, also, are statements made by instructors (both full-time and part-time) in class or in published form that describe differences in the lot of the two faculty groups. Examples of such statements have been presented earlier. Another example appeared in a recently published College newletter, where a part-time instructor observed in an interview with the Chancellor of the Saddleback Community College District that he had

> touched on one real problem of part-timers: that of mutual respect and of the feeling that part-timers have that we are second class citizens. . . . What is hard for you to understand is how it feels to be totally powerless and to have no recourse (Inman, 1986:2).

The notion that part-time instructors have little input to the planning and operation of their institutions in comparison to the full-time faculty was described in the literature review. It was pointed out that Greenwood (1980:57) suggested the establishment of a committee of part-time faculty that could act in an advisory capacity to the college administration to promote the socialization of the part-time faculty. It is recommended that such a committee be formed at Saddleback College. This committee would provide a voice for the part-time faculty and a channel for addressing faculty concerns less apparent to the students than articles in the College newspaper and published newsletters. This, in turn, should de-emphasize the distinctions between the two faculty groups and help dissolve the difference in student preference.

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